FAIL-SAFE®

DESCRIPTION

Designed to retain the aesthetics of a commercial wraparound, Fail-Safe's FWS Series assures owners an unbreakable, maintenance free, one time installation. Ideally suited for high abuse areas that must maintain a clean, well lighted appearance, Fail-Safe's FWS comes as ceiling or wall mounted, one to four lamp units to provide general ambient illumination.

The FWS Series is specifically designed for use in public access areas where vandalism may occur and for areas that must maintain a clean, well-lighted appearance. Ideal for schools, dormitories, hallways, locker rooms, shower facilities, and restrooms.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

A ... Lens
Nominal .156, UV stabilized, clear K12, impact resistant, prismatic polycarbonate refractor for high efficiency, low surface brightness and maximum strength.

B ... Fasteners
Captive, stainless steel tamperproof torxhead screws prevent unauthorized access.

C ... Housing
Die-formed 16 ga. CRS with welded and ground ends and internal weld bands for

C ... Housing Cont.
added strength. Standard white high reflectance polyester powder coat finish. Gloss: 85%; Reflectance: 93%; Hardness Minimum: 2H; Salt Spray: 500 hours.

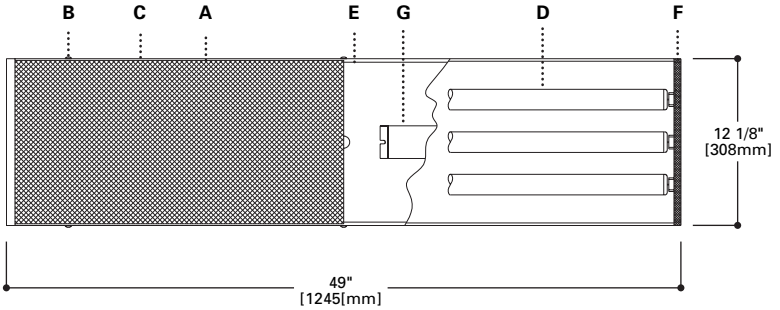
D ... Lamps
(By Others)

E ... Lens Retention
Double wall lens channel captivates lens to prevent unauthorized fixture penetration.

F ... Gasket
Concealed, polyurethane end gaskets inhibit the entrance of environmental contaminants.

G ... Ballast
Copper wound HPF, rapid start, Class P, CBM/ETL ballast is standard.

Labels
U.L. listed, C.S.A. certified, standard wet label.

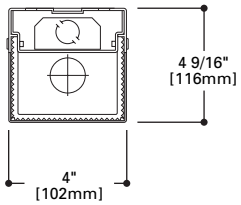


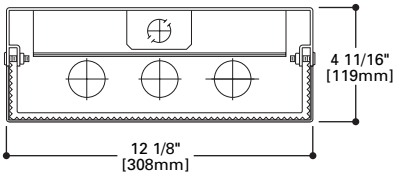
FWS

17W - 120W
Fluorescent

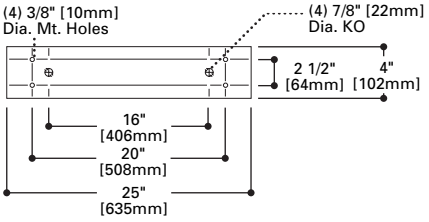
POLYCARBONATE
HIGH ABUSE LUMINAIRE
Clear Prismatic or White
1 and 3 Lamp

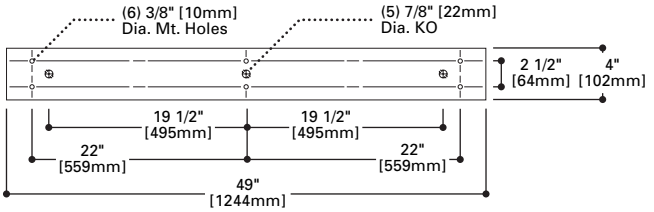
SIDE DIMENSIONS

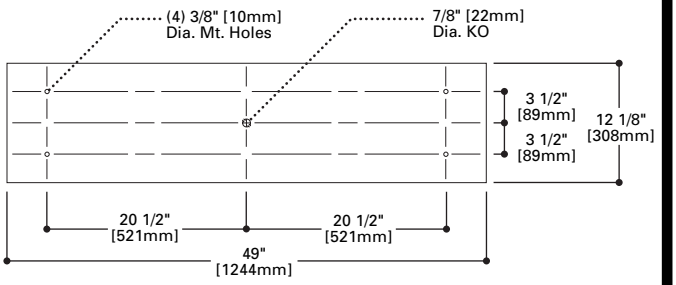




MOUNTING DIMENSIONS







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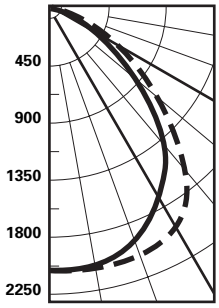
ENERGY DATA

For Energy Management related technical data to support the performance of this fixture series, refer to the ordering information for input wattage.

PHOTOMETRICS

Candlepower Distribution



Test No. 4870
FWS-340-120
Lamp=(3) F40T12RS/WW
Lumens=3200
Spacing Criteria
⊥=1.4 II=1.2
Efficiency=55.0%

⊥
II

Candlepower

Deg.	⊥	II
0	2107	2107
5	2111	2107
15	2123	2044
25	2105	1876
35	1928	1567
45	1290	912
55	706	565
65	438	266
75	381	139
85	359	71
90	283	7

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Luminaire
0-30	1641	17.1	31.3
0-40	2765	28.8	52.8
0-60	4137	43.1	79.0
0-90	4933	51.4	94.1
90-180	307	3.2	5.9
0-180	5240	54.6	100.0

Coefficient of Utilization

rc	80%				70%			50%		30%		10%		0%
rw	70	50	30	10	50	30	10	50	10	50	10	50	10	0
RCR														
0	47	47	47	47	46	46	46	43	43	41	41	39	39	38
1	44	42	40	39	41	39	38	39	36	37	35	35	34	33
2	40	37	35	33	36	34	32	35	31	33	30	32	29	28
3	37	34	31	29	33	30	28	31	27	30	27	29	26	25
4	35	31	27	25	30	27	25	29	24	27	24	26	23	22
5	32	28	24	22	27	24	22	26	21	25	21	24	21	20
6	30	25	22	20	25	22	20	24	19	23	19	22	19	18
7	28	23	20	18	23	20	18	22	17	21	17	20	17	16
8	26	21	18	16	21	18	16	20	15	19	15	19	15	14
9	24	19	16	14	19	16	14	18	14	18	14	17	13	13
10	23	18	15	13	17	14	13	17	12	16	12	16	12	11

rc=Ceiling reflectance, rw=Wall reflectance, RCR=Room cavity ratio
CU Data Based on 20% Effective Floor Cavity Reflectance.

ORDERING INFORMATION

SAMPLE NUMBER: FWS-340-120-LE3-GLR

Product Family
FWS
- **FWS**=High Abuse Surface Luminaire

Lamp Type
2'
- **117**=(1) 17W T8 Lamp
- **317**=(3) 17W T8 Lamp
- **120**=(1) 20W T12 Lamp[2]
- **320**=(3) 20W T12 Lamp[2]
- **140BX**=(1) 40W Biaxial Lamp
- **340BX**=(3) 40W Biaxial Lamp

4'
- **132**=(1) 32W T8 Lamp
- **332**=(3) 32W T8 Lamp
- **140**=(1) 40W T12 Lamp
- **340**=(3) 40W T12 Lamp

Voltage[3]
- **120**=120V
- **277**=277V
- **347**=347V

Ballast[3]
- **LE3**=Energy Saving Ballast
- **LEOC8**=Energy Saving Ballast for use with T8 Lamp

Electronic Ballast[1]
- **EB81**=(1) Ballast for use with T8 Lamp
- **EB82**=(2) Ballasts for use with T8 Lamp
- **EB21**=(1) Ballast for use with T12 Lamp[2]
- **EB22**=(2) Ballasts for use with T12 Lamp[2]
- **EBX1**=(1) Ballast for use with Biaxial Lamp
- **EBX2**=(2) Ballasts for use with Biaxial Lamp

Options
- **EBP**=Emergency Battery Pack
- **ELR**=End Lens Retention
- **FNL**=Fluorescent Night Light (Lamp by others)
- **FNL13**=Fluorescent Night Light (13W Lamp. Lamp by others.)
- **GLR**=Fuse and Holder
- **OPL**=Opal Diffuser
- **RIF**=Radio Interference Filter
- **SPS**=Security Push Button On/Off Switch

Accessories (order separately)
- **VRSD**=TORX®-Head Vandal Resistant Screwdriver

Notes:
For additional options consult Cooper Lighting Representative.
Specifications and Dimensions subject to change without notice.

[1] For specific electronic ballast, specify brand and catalog number.

[2] Electronic ballast not available with F20T12 lamps.

[3] Products also available in non-US voltages and 50Hz for international markets. Consult your Cooper Lighting Representative for availability and ordering information.